

02/28/02



10086600-022402

31044

Please type a plus sign (+) inside this box →

03-04-u

PTO/SB/05 (12/97)

Not for use through 9/30/00. OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

1027.2.1

Total Pages

83

First Named Inventor or Application Identifier

David B. Buehler

Express Mail Label No.

EU070956742US

02/28/02
10086600-022402
J0973 U.S. PTO
366

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)2. ☒ Specification (Total Pages) 57
(Preferred arrangement set forth below)

- Descriptive title of the Invention
- Cross References to Related Application
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

3. ☒ Drawing(s) (35 USC 113) (Total Pages) 244. Oath or Declaration (Total Pages) 2a. ☒ Newly executed (original or copy)b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation (divisional with Box 17 completed)
(Note Box 5 below)i. ☐ DELETION OF INVENTOR(S)Signed statement attached deleting inventor(s) named
in prior application, see 37 CFR 1.63(d)(2) and 1.33(b).5. ☐ Incorporation by Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy
of the oath or declaration is supplied under Box 4b is considered
as being part of the disclosure of the accompanying application
and is hereby incorporated by reference therein.6. ☐ Microfiche Computer Program (Appendix)7. Nucleotide and/or Amino Acid Sequence Submission (if
applicable, all necessary)a. ☐ Computer Readable Copyb. ☐ Paper Copy (identical to computer copy)c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))9. ☐ 37 CFR 3.73(b) Statement ☒ Power of Attorney
(when there is an assignee)10. ☐ English Translation Document (if applicable)11. ☐ Information Disclosure ☐ Copies of IDS
Statement (IDS)/PTO-1449 Citations12. ☐ Preliminary Amendment13. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)14. ☒ Small Entity ☐ Statement filed in prior application,
Status still proper and desired15. ☐ Certified Copy of Priority Document(s)
if foreign priority is claimed)16. ☒ Other: Express Mail Certificate

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.:

18. CORRESPONDENCE ADDRESS

- ☐ Customer Number or Bar Code Label _____
- ☐ Or Correspondence address below

NAME

Brian C. Kunzler

ADDRESS

10 West 100 South

CITY

Salt Lake City

STATE

Utah

ZIP

84101

COUNTRY

United States

TELEPHONE

(801) 994-4646

FAX

(801) 322-1054

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Please type a plus sign (+) inside this box → +

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<h2 style="margin: 0;">FEE TRANSMITTAL</h2> <p style="margin: 10px 0 0 0;"><i>Note: Effective October 1, 2001. Patent fees are subject to annual revision.</i></p>		Complete If Known	
		Application Number	Not yet assigned
		Filing Date	
		First Named Inventor	David B. Buehler
		Group Art Unit	
		Examiner Name	
TOTAL AMOUNT OF PAYMENT	\$ 406	Attorney Docket Number	1027.2.1

METHOD OF PAYMENT (check one)	FEE CALCULATION (continued)																																																																																																																																																																																		
<p>1. <input type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:</p> <p>Deposit Account No.: _____</p> <p>Deposit Account Name: _____</p> <p>Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 <input type="checkbox"/> Charge the Issue Fee In 37 CFR at the Mailing of the Notice of Allowance <input type="checkbox"/></p> <p>2. <input type="checkbox"/> Payment Enclosed:</p> <p style="margin-left: 20px;"><input type="checkbox"/> Check <input type="checkbox"/> Money Order <input type="checkbox"/> Other</p>	<h3>3. ADDITIONAL FEES</h3> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2520</td><td>147</td><td>2520</td><td>For filing a request for reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1840*</td><td>113</td><td>1840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>920</td><td>217</td><td>460</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1440</td><td>218</td><td>720</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1960</td><td>228</td><td>980</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>320</td><td>219</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>320</td><td>220</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>280</td><td>221</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1510</td><td>138</td><td>1510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - intentional</td><td></td></tr> <tr><td>141</td><td>1280</td><td>241</td><td>640</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1280</td><td>242</td><td>640</td><td>Utility issue fee</td><td></td></tr> <tr><td>143</td><td>460</td><td>243</td><td>230</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>620</td><td>244</td><td>310</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>146</td><td>740</td><td>246</td><td>370</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>149</td><td>740</td><td>249</td><td>370</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> <tr><td colspan="6">Other fee (specify) _____</td></tr> <tr><td colspan="6">Other fee (specify) _____</td></tr> </tbody> </table>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	105	130	205	65	Surcharge - late filing fee or oath		127	50	227	25	Surcharge - late provisional filing fee or cover sheet		139	130	139	130	Non-English specification		147	2520	147	2520	For filing a request for reexamination		112	920*	112	920*	Requesting publication of SIR prior to Examiner action		113	1840*	113	1840*	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for reply within first month		116	400	216	200	Extension for reply within second month		117	920	217	460	Extension for reply within third month		118	1440	218	720	Extension for reply within fourth month		128	1960	228	980	Extension for reply within fifth month		119	320	219	160	Notice of Appeal		120	320	220	160	Filing a brief in support of an appeal		121	280	221	140	Request for oral hearing		138	1510	138	1510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive - intentional		141	1280	241	640	Petition to revive - unintentional		142	1280	242	640	Utility issue fee		143	460	243	230	Design issue fee		144	620	244	310	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	50	123	50	Petitions related to provisional applications		126	180	126	180	Submission of Information Disclosure Stmt		581	40	581	40	Recording each patent assignment per property (times number of properties)		146	740	246	370	Filing a submission after final rejection (37 CFR 1.129(a))		149	740	249	370	For each additional invention to be examined (37 CFR 1.129(b))		Other fee (specify) _____						Other fee (specify) _____					
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																														
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																
105	130	205	65	Surcharge - late filing fee or oath																																																																																																																																																																															
127	50	227	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																															
139	130	139	130	Non-English specification																																																																																																																																																																															
147	2520	147	2520	For filing a request for reexamination																																																																																																																																																																															
112	920*	112	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																															
113	1840*	113	1840*	Requesting publication of SIR after Examiner action																																																																																																																																																																															
115	110	215	55	Extension for reply within first month																																																																																																																																																																															
116	400	216	200	Extension for reply within second month																																																																																																																																																																															
117	920	217	460	Extension for reply within third month																																																																																																																																																																															
118	1440	218	720	Extension for reply within fourth month																																																																																																																																																																															
128	1960	228	980	Extension for reply within fifth month																																																																																																																																																																															
119	320	219	160	Notice of Appeal																																																																																																																																																																															
120	320	220	160	Filing a brief in support of an appeal																																																																																																																																																																															
121	280	221	140	Request for oral hearing																																																																																																																																																																															
138	1510	138	1510	Petition to institute a public use proceeding																																																																																																																																																																															
140	110	240	55	Petition to revive - intentional																																																																																																																																																																															
141	1280	241	640	Petition to revive - unintentional																																																																																																																																																																															
142	1280	242	640	Utility issue fee																																																																																																																																																																															
143	460	243	230	Design issue fee																																																																																																																																																																															
144	620	244	310	Plant issue fee																																																																																																																																																																															
122	130	122	130	Petitions to the Commissioner																																																																																																																																																																															
123	50	123	50	Petitions related to provisional applications																																																																																																																																																																															
126	180	126	180	Submission of Information Disclosure Stmt																																																																																																																																																																															
581	40	581	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																															
146	740	246	370	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																															
149	740	249	370	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																																																																															
Other fee (specify) _____																																																																																																																																																																																			
Other fee (specify) _____																																																																																																																																																																																			
<h3>1. FILING FEE</h3> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>101</td><td>740</td><td>201</td><td>370</td><td>Utility filing fee</td><td>370</td></tr> <tr><td>106</td><td>330</td><td>206</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>107</td><td>510</td><td>207</td><td>255</td><td>Plant filing fee</td><td></td></tr> <tr><td>108</td><td>740</td><td>208</td><td>370</td><td>Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>160</td><td>214</td><td>80</td><td>Provisional filing fee</td><td></td></tr> <tr><td colspan="5">SUBTOTAL (1)</td><td>\$ 370</td></tr> </tbody> </table> <h3>2. CLAIMS</h3> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Extra</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>Total Claims 24 - 20 =</td> <td>4</td> <td>9</td> <td>36</td> </tr> <tr> <td>Ind. Claims 3 - 3 =</td> <td>0</td> <td>42</td> <td>0</td> </tr> <tr> <td>Multiple Dep. Claims</td> <td>0</td> <td>140</td> <td>0</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>103</td><td>18</td><td>203</td><td>9</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>102</td><td>84</td><td>202</td><td>42</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>104</td><td>280</td><td>204</td><td>140</td><td>Multiple dependent claim</td><td></td></tr> <tr><td>109</td><td>84</td><td>209</td><td>42</td><td>Reissue independent claims over original patent</td><td></td></tr> <tr><td>110</td><td>18</td><td>210</td><td>9</td><td>Reissue claims in excess of 20 and over original patent</td><td></td></tr> <tr><td colspan="5">SUBTOTAL (2)</td><td>\$36</td></tr> </tbody> </table>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	101	740	201	370	Utility filing fee	370	106	330	206	165	Design filing fee		107	510	207	255	Plant filing fee		108	740	208	370	Reissue filing fee		114	160	214	80	Provisional filing fee		SUBTOTAL (1)					\$ 370		Extra	Fee from below	Fee Paid	Total Claims 24 - 20 =	4	9	36	Ind. Claims 3 - 3 =	0	42	0	Multiple Dep. Claims	0	140	0	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	103	18	203	9	Claims in excess of 20		102	84	202	42	Independent claims in excess of 3		104	280	204	140	Multiple dependent claim		109	84	209	42	Reissue independent claims over original patent		110	18	210	9	Reissue claims in excess of 20 and over original patent		SUBTOTAL (2)					\$36	<p>*Reduced by Basic Filing Fee</p> <p>SUBTOTAL (3)</p>																																																																						
Large Entity		Small Entity		Fee Description			Fee Paid																																																																																																																																																																												
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																
101	740	201	370	Utility filing fee	370																																																																																																																																																																														
106	330	206	165	Design filing fee																																																																																																																																																																															
107	510	207	255	Plant filing fee																																																																																																																																																																															
108	740	208	370	Reissue filing fee																																																																																																																																																																															
114	160	214	80	Provisional filing fee																																																																																																																																																																															
SUBTOTAL (1)					\$ 370																																																																																																																																																																														
	Extra	Fee from below	Fee Paid																																																																																																																																																																																
Total Claims 24 - 20 =	4	9	36																																																																																																																																																																																
Ind. Claims 3 - 3 =	0	42	0																																																																																																																																																																																
Multiple Dep. Claims	0	140	0																																																																																																																																																																																
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																														
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																
103	18	203	9	Claims in excess of 20																																																																																																																																																																															
102	84	202	42	Independent claims in excess of 3																																																																																																																																																																															
104	280	204	140	Multiple dependent claim																																																																																																																																																																															
109	84	209	42	Reissue independent claims over original patent																																																																																																																																																																															
110	18	210	9	Reissue claims in excess of 20 and over original patent																																																																																																																																																																															
SUBTOTAL (2)					\$36																																																																																																																																																																														

SUBMITTED BY				Complete (if applicable)	
Typed or Printed Name	Brian C. Kunzler		Reg. Number	38,527	
Signature		Date	Feb 28, 2002		
			Deposit Account User ID		

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

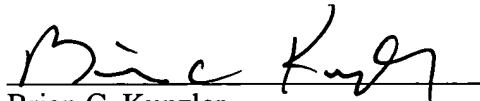
CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"Express Mail" Mailing Label No.: EU070956742US

Date of Deposit: February 28, 2002

I hereby certify that this patent application in the name of David B. Buehler for
RECURSIVE RAY CASTING METHOD AND APPARATUS, together with the drawings, a
Declaration, Power of Attorney, and Check No.1734 for \$ 406.00 are being deposited with the
United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §
1.10 on the date indicated above in an envelope addressed to Box Patent Application, Assistant
Commissioner for Patents, Washington, D.C. 20231.

Respectfully submitted,



Brian C. Kunzler
Reg. No. 38,527
Attorney for Applicant

Date: February 28, 2002

Brian C. Kunzler, P.C.
10 West 100 South, Suite 425
Salt Lake City, Utah 84101
Telephone: 801/994-4646

2002-02-28 09:22:00